REMARKS

The Office Action of May 24, 2001 presents the examination of claims 20-37. Claims 20, 23 and 27 are amended. Claims 38 and 39 are added. Support for claim additions and amendments is found in the specification. No new matter is inserted into the application.

Rejection under 35 U.S.C. § 103

The Examiner maintains the rejection of claims 20-25 and 27-29 under 35 U.S.C. § 103(a) for allegedly being unpatentable over Dower '603 (USP 5,639,603) in view of Koster '031 (USP 6,043,031). Claims 20-30 are rejected for allegedly being unpatentable over Dower '603 in view of Koster '031, and further in view of Dodge '117 (USP 5,912,117). Finally, the Examiner maintains the rejection of claims 20-37 for allegedly being unpatentable over Dower '603 in view of Koster '031, further in view of Dodge '117, and further in view of the Stratagene Catalogue (1998).

Applicants respectfully traverse the rejection applied to the pending claims. Reconsideration of the claims and withdrawal of the instant rejection are respectfully requested.

The Present Invention

The present invention is directed to a method for selectively amplifying a DNA corresponding to RNA even in the presence of an admixture of both DNA and cDNA. This method comprises the steps of providing a template cDNA comprising a nucleotide analog and amplifying a desired DNA from the template cDNA in the presence of two or more kinds of nucleotide analogs. At least one nucleotide analog is incorporated in the amplifying step in place of dGTP or dCTP, and at least one nucleotide analog is incorporated in the amplifying step in place of dATP or dTTP. The nucleotide analogs are incorporated into the synthesized chain at a uniform frequency. Therefore, the present invention provides an easy method for selectively amplifying a DNA corresponding to RNA. These features of the present invention are recited in independent claims 20, 23, and 27.

Distinctions between the cited prior art references and the present invention

Dower '603 and Koster '031

In the outstanding Office Action, it appears that the Examiner remains convinced that one skilled in the art would be motivated to combine the teachings of Dower '603 and Koster '031 to achieve the present invention. Applicants respectfully

disagree with the Examiner's assertions and submit that the present invention is not obvious over Dower '603 in view of Koster '031.

First, contrary to the Examiner's assertions, the disclosures of Dower '603 and Koster '031 are simply not combinable. Specifically, it is unreasonable to use an oligonucleotide analog disclosed in Dower '603 for the purpose of achieving the object of Koster '031, which is to provide a fast and accurate mass spectrometer-based process for detecting a particular nucleic acid sequence in a biological sample. This is because the oligonucleotide analog of Dower '603 is used for preventing acid hydrolysis, which is a completely irrelevant application from that which is taught by Koster '031. Thus, there is no motivation to combine Dower '603 and Koster '031.

Second, Applicants note that even if Dower '603 and Koster '031 were hypothetically combined, the combination still fails to support each and every element of the present invention. Specifically, neither reference teaches amplification of a nucleotide template containing nucleotide analogs in the presence of nucleotide analogs, wherein the nucleotide analogs are uniformly incorporated into the resulting DNA, for the purpose of selectively amplifying a product corresponding to RNA. Nonetheless, the Examiner raises the fact that the above phrase is absent from the claims in the outstanding Office

Action (page 9, last paragraph). In response to the Examiner's remarks, Applicants amend the claims by inserting the phrase "wherein nucleotide analogs (i) and (ii) are uniformly incorporated into the resulting DNA" in order to distinguish over the combination of Dower '603 and Koster '031.

For the above reasons, the combination of Dower '603 and Koster 031 fails to make the present invention obvious. Specifically, the combined references fail to describe that a desired DNA can be amplified by using a DNA template comprising nucleotide analogs in the presence of (i) at least one nucleotide analog to be incorporation in place of dGTP or dCTP, and (ii) at least one nucleotide analog to be incorporated in place of dATP or dTTP, wherein nucleotide analogs are uniformly incorporated into the resulting DNA. Thus, the instant rejection is improper and should be withdrawn.

Dodge '117 and the Stratagene Catalogue

The disclosure of Dodge '117 is relied upon by the Examiner to teach the lowering of T_m value with DMSO, while the Stratagene catalog is cited merely to provide motivation for a kit. Applicants respectfully disagree with the Examiner's assertions.

Dodge '117 discloses amplification by PCR, wherein glycerol and other related solvents are used to increase the sensitivity of the PCR during amplification and to overcome problems

pertaining to the sequencing of regions of DNA having strong secondary structure. However, Dodge '117 fails to disclose a targeted sequence derived from an RNA can be selectively amplified by the use of glycerol and other related solvents, such as DMSO. As such, the ordinary artisan would not be motivated to combine the inventions of Dower '603, Koster '031, and Dodge '117 to achieve the instant method of selective DNA amplification.

Finally, the Stratagene catalogue fails to cure the deficiencies of Dower '603, Koster '031, and Dodge '117. The Stratagene catalogue merely advertises kits, and does not provide motivation for the instant method of selective DNA amplification.

In conclusion, the Examiner fails to make a *prima facie* case of obviousness. The hypothetical combination of Dower '603 and Koster '031, and further, Dodge '117 and the Stratagene catalogue, still fails to support all of the claimed features of the present invention. Specifically, none of the cited reference teaches amplification of a cDNA template containing nucleotide analogs in the presence of nucleotide analogs.

In sum, all of the present claims define patentable subject matter such that this application should be placed into condition for allowance. Early and favorable action on the merits of the present application is thereby requested.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Kristi L. Rupert, Ph.D. (Reg. No. 45,702) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Pursuant to the provisions of 37 C.F.R. § 1.17 and 1.136(a), Applicants hereby petition for an extension of one (1) months to September 24, 2001 for the period in which to file a response to the outstanding Office Action. The required fee of $390.00 is attached hereto.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §1.16 or under 37 C.F.R. §1.17; particularly, extension of time fees.

Respectfully submitted,

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